

## CHECKLIST OF THE GENUS *HALPE* (LEPIDOPTERA, HESPERIIDAE) FROM CHINA WITH DESCRIPTION OF A NEW SPECIES

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**Abstract** The species of the skipper genus *Halpe* Moore occurring in China is briefly reviewed. The genus *Halpe* contains 16 known species in China. *Halpe concavimarginata* is described and illustrated as a new species from Lushan, Sichuan Province. The type specimens are deposited in the Entomological Museum, Northwest Sci-Tech University of Agriculture and Forestry. A key to species of the genus *Halpe* from China is provided for the convenience of identification.

**Key words** Lepidoptera, HesperIIDae, *Halpe*, new species, taxonomy, China.

The skipper genus *Halpe* (Lepidoptera, HesperIIDae, HesperIIDae, Astictopteriini) was established by Moore in 1877 with *Hesperilla porus* Mabilie, 1877 as its type species. Evans (1949) classified into 25 species and 27 subspecies. In these 25 species *H. homolea* (Hewitson, 1868) comprised 10 subspecies. Here after Eliot (1959), Russell (1984), Tsukiyama & Chiba (1991, 1999), De Jong & Treadaway (1993), Devyatkin (1997, 2002), Huang Hao (1999, 2002, 2003, 2004), Huang Hao & Wu Chun-Sheng (2003) described 16 new species and 2 new subspecies in the genus *Halpe*. Based on the constant considerable differences in male genitalia and sympatric distribution they suggested that 7 subspecies in Evans' key on the genus *Halpe*, namely *H. homolea nephele* Leech, 1893, *H. homolea acuma* Swinhoe, 1893; *H. homolea molda* Evans, 1949; *H. homolea filda* Evans, 1949; *H. homolea handa* Evans, 1949; *H. dante luzona* Evans, 1949; *H. dante tilia* Evans, 1949; should be raised to full species. Up to now the genus *Halpe* have been consisted of 48 known species over the world, of which 16 species have been recorded in China. In the present paper a new species, *H. concavimarginata* sp. nov. from Lushan County, Sichuan Province is described. Type specimens is deposited in the Entomological Museum, Northwest Sci-Tech University of Agriculture and Forestry. A key to species of the genus *Halpe* from China is provided for the convenience of identification.

### Genus *Halpe* Moore, 1878

*Halpe* Moore, 1878. Proc. Zool. Soc. Lond. (3): 689. Type species: *Hesperilla porus* Mabilie, 1877; Evans, 1949. Cat. Hesp. Eur. As. Aus. 257; Bridges, 1994. Cat. Hesp. World: 13, 28; Chou, 1994. Mon. Rhop. Sin., 722; Chou, 1998. Class. Id. Chin. Butt., 289.

adult. Length of forewing 13-21 mm, brown, fuscous, pitchy. Forewing with sub-hyaline white or yellow spots, 0-2 cell spots, 2 discal spots, and 2-3 sub-

apical spots, fore margin straight, apical and anal angles somewhat protruded, upper distal angle of cell pointed. Palpi short, porrect. For male genitalia tegumen with 1 pair of process; saccus small; valva triangular, basal end of harpe is furnished with a footstalk wound round aedeagus, cuiller generally bilobate. Brands black, extend from dorsum to  $M_3$ , and arranged in an oblique line on upperside of forewing.

Distribution. Oriental Realm.

### Key to species of the genus *Halpe* from China ( )

1. Hindwing underside with sub-hyaline spots ..... 6  
Hindwing underside without sub-hyaline spots
2. Smaller sized, length of forewing 13.0-15.5 mm ..... 3  
Larger sized, length of forewing 16.5-17.0 mm ..... 4
3. Outer cilliae on both sides of wings more reddish; length of forewing 13-15 mm ..... *H. kumara* de Nicéville  
Outer cilliae on both sides of wings dark brown; length of forewing 15.5 mm ..... *H. parakumara* Huang
4. Forewing upperside with 2 cell spots; length of forewing 16.5-18.0 mm ..... *H. paupera* Devyatkin  
Forewing upperside with 1 cell spot
5. Outer cilliae on both sides of wings dark brown; 2 discal spots on forewing upperside rectangled and their outer margins not concave inwards; length of forewing 16.5-17.0 mm ..... *H. mixta* Huang  
Outer cilliae on both sides of wings reddish; 2 discal spots on forewing upperside not rectangled and their outer margins concave inwards; length of forewing 17 mm ..... *H. unicolora* Huang
6. Forewing with cell spot ..... 9  
Forewing without cell spot
7. Length of forewing 15.5 mm; forewing upperside with 2 larger discal spots, more than 1/2 of the spot in  $m_3$  and the one in  $cu_1$  overlapping ..... *H. muoi* Huang  
Length of forewing 17-18 mm; forewing upperside with 2 smaller discal spots, less than 1/2 of the spot in  $m_3$  and the one in  $cu_1$  overlapping
8. 3 subapical spots on forewing upperside; cuiller bilobate, both upper and distal lobi not slender and more pointed end ..... *H. filda* Evans  
2 subapical spots on forewing upperside; cuiller bilobate, both upper and distal lobi very slender and very pointed end ..... *H. handa* Evans
9. Forewing with 1 cell spot ..... 12  
Forewing with 2 cell spots
10. Forewing underside with 2 separated cell spots and 2 discal spots, the spot in  $cu_1$  as long as wide; length of forewing 15-16 mm ..... *H. porus* (Mabilie)

Forewing underside with 2 more or less conjoined cell spots and 2 discal spots, the spot in  $cu_1$  conspicuously longer than wide

11. Forewing underside with cell spots nearly always completely conjoined; inner margins of discal band on hindwing underside not sharply defined, and veins of disc pale; length of forewing 15.0-15.5 mm ..... *H. hauxwelli* Evans
- Forewing underside with cell spots somewhat conjoined; inner margins of discal band on hindwing underside sharply defined, and veins of disc not pale; length of forewing 18 mm ..... *H. gamma* Evans
12. Larger sized, length of forewing 17-20 mm ..... 13
- Smaller sized, length of forewing 15.5-16.0 mm ..... 15
13. Length of forewing 17 mm; markings on underside of hindwing ill defined ..... *H. sikkima* Moore
- Length of forewing 17.5-20.0 mm; markings on underside of hindwing conspicuously defined
14. Length of forewing 17.5-18.0 mm, outer margins of 2 discal spots not concave inwards ..... *H. nephele* Leech
- Length of forewing 18-20 mm, outer margins of 2 discal spots concave inwards ..... *H. concavimarginata* sp. nov.
15. Cuiller with an arc concavity between upper and distal lobi, and serrations in the concavity continuous ..... *H. dizangpusa* Huang
- Cuiller without an arc concavity between upper and distal lobi, and serrations in the concavity not continuous
16. Forewing with 2 discal spots, less than 1/3 of the spot in  $m_3$  and the one in  $cu_1$  overlapping; cuiller with a V-like concavity between upper and distal lobi, and 2 lobi pointed end ..... *H. acucma* Swinhoe
- Forewing with 2 discal spots, more than of the spot in  $m_3$  and the one in  $cu_1$  overlapping; cuiller without clear 2 lobi, distal lobe finger-shaped, inner lobe very short and truncated end ..... *H. molta* Evans

### 1 *Halpe porus* (Mabille, 1877)

*Hesperilla porus* Mabille, 1877. Bull. Soc. Ent. Fr., 6 (5): 199.

*Halpe porus* Evans, 1949. Cat. Hesp. Eur. As. Aus., 260.

Specimens examined. 2, Jianfengling, Hainan, 24 Aug. 2002, WANG Zong-Qing and CHE Yan-Li.

Distribution. Hainan, Guangdong, Guangxi; India, Myanmar, Vietnam.

### 2 *Halpe nephele* Leech, 1893

*Halpe nephele* Leech, 1893. Butt. China Jap. Cor., 622.

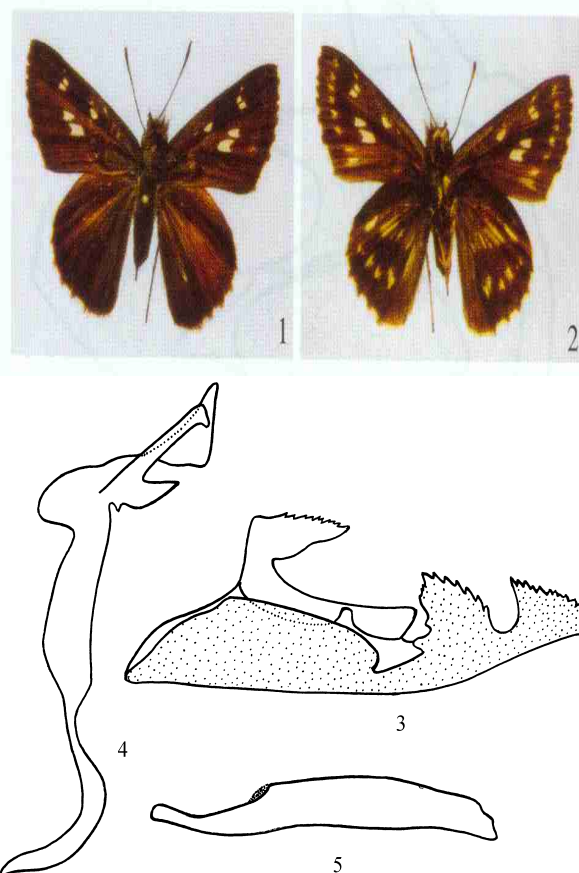
Specimens examined. 3, Jishou City, Hunan Province, 8 Aug. 1998, 24 Aug. 1999, XIE Fu-Yi; 3, Lushan County, Sichuan Province, 1996, WANG Bing-Hong.

Distribution. Zhejiang, Sichuan, Guizhou, Guangxi, Fujian, Xizang, Hunan, Hainan; Iran, India, Sikkim, Bhutan, Myanmar.

### 3 *Halpe concavimarginata* sp. nov.

adult. Length of forewing 18-20 mm. Length of antenna 10-11 mm. Antenna longer than half of forewing, nudum yellowish brown, all 11 in apiculus, apiculus straight, shaft and club black above, club black below, shaft chequered with black and white below. Upperside of forewing brunneus, with sub-hyaline griseous spots, 1 cell spot in upper cell; 2 discal spots in space  $m_3$  and  $cu_1$ , the spot in  $cu_1$  closer to wing base than the one in  $m_3$ , 1/3 of both these spots overlapping, outer margins of the 2 discal spots concave inwards; 3 subapical spots in space  $r_3$ ,  $r_4$ ,  $r_5$ , the spots in  $r_4$  closer to wing

base. Brands black, extended from 2A to  $M_3$  and arranged in an oblique line. Underside of forewing fuscous, base half clad with yellowish scales, with spots as upperside, but with a submarginal band comprising 8 yellowish spots, in which former 5 spots distinctly defined. Hindwing upperside unmarked, underside fuscous, basal 1/3 area clad with yellowish scales, with discal band comprising 5 yellowish spots and a submarginal band comprising 4 spots, the both bands sharply defined, and the area between two bands fuscous. Ciliae of both forewing and hindwing chequered with black and white.



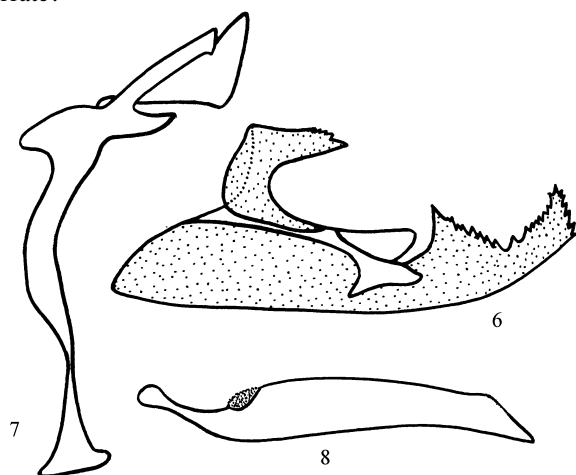
Figs. 1-5. *Halpe concavimarginata* sp. nov. 1. Adult, dorsal view. 2. adult, ventral view. 3. right valva, inside view. 4. Tegumen and vinculum, lateral view. 5. Aedeagus, lateral view.

genitalia. Cuiller bilobate, concavity between 2 lobi is U-like, no serrations in the concavity, the outer margins of upper and distal lobi serrate, but their inner margins not serrate. Aedeagus with basal area curved upwards and truncated end.

Holotype, Lushan County, Sichuan Province, 1996, coll. WANG Bing-Hong. Paratype 1, same data as holotype.

Remarks. The new species in the appearance is similar to *Halpe nephele* Leech 1893, but can be distinguished from the latter by: 1) length of forewing

18-20 mm; 2) outer margins of discal spots on forewing concave inwards; 3) ciliae of both forewing and hindwing chequered with black and white; 4) cuiller bilobate, concavity between 2 lobi is U-like, no serrations in the concavity, the outer margins of upper and distal lobi serrate, but their inner margins not serrate. In *Halpe nephela* Leech: 1) length of forewing 17.5-18.0 mm; 2) outer margins of discal spots on forewing not concave inwards; 3) ciliae of both forewing and hindwing not chequered with black and white; 4) cuiller bilobate, concavity between 2 lobi is V-like, serrations in the concavity present, the outer margins of distal lobe serrate.



Figs. 6-8. Genitalia of *Halpe nephela* Leech, 1893. 6. right valva, inside view. 7. Tegumen and vinculum, lateral view. 8. Aedeagus, lateral view.

The new species is also similar to *Halpe albicillia* Tsukiyama et Chiba 1991 from Sulawesi Isl., Indonesia, but the latter is different from the new species in: 1) length of forewing 20-21 mm; 2) all ciliae of hindwing white.

**Etymology.** The scientific name *concamarginata* refers the outer margins of 2 discal spots on forewing are concave inwards.

#### 4 *Halpe dizangpusa* Huang, 2002

*Halpe dizangpusa* Huang, 2002. *Atalanta*, 33 (1/2): 109.

**Distribution.** Anhui (Jiuhua Shan), Hainan, Fujian, Zhejiang, nearly entire Southeast China.

#### 5 *Halpe acuma* Swinhoe, 1893

*Halpe acuma* Swinhoe, 1893. *Trans. Ent. Soc. Lond.*, 4 (3): 325.

**Distribution.** Xizang (Mêlog); India, Myanmar.

#### 6 *Halpe molta* Evans, 1949

*Halpe homlea molta* Evans, 1949. *Cat. Hesp. Eur. As. Aus.*, 267.  
*Halpe molta* Huang, 1998. *Neue Ent. Nachr.*, 40: 214.

**Distribution.** Xizang (Mêlog); Sikkim.

#### 7 *Halpe filda* Evans, 1949

*Halpe homlea filda* Evans, 1949. *Cat. Hesp. Eur. As. Aus.*, 262.  
*Halpe filda* Huang, 1998. *Neue Ent. Nachr.*, 41: 214.

**Distribution.** Xizang (Mêlog); Sikkim.

#### 8 *Halpe handa* Evans, 1949

*Halpe homlea handa* Evans, 1949. *Cat. Hesp. Eur. As. Aus.*, 262.  
*Halpe handa* Huang, 2003. *Neue Ent. Nachr.*, 55: 36, 164.

**Distribution.** Yunnan (Nujiang); Myanmar.

#### 9 *Halpe unicolora* Huang, 1999

*Halpe unicolora* Huang, 1999. *Lambillionea*, 99 (4): 664.

**Distribution.** Xizang (Mêlog).

#### 10 *Halpe kumara* De Nicville, 1885

*Halpe kumara* de Niceville, 1885. *J. Asiat. Soc. Bengal.*, 54 (2): 121.

**Distribution.** Xizang (Mêlog); Sikkim, India.  
2 subspecies in China.

#### *Halpe kumara kumara* De Niceville, 1885

*Halpe kumara* de Niceville, 1885. *J. Asiat. Soc. Bengal.*, 54 (2): 121.  
*Halpe kumara kumala* Huang, 2003. *Neue Ent. Nachr.*, 55: 31.

**Distribution.** Xizang (Mêlog); Sikkim, India.

#### *Halpe kumara micromacula* Huang, 2003

*Halpe kumara micromacula* Huang, 2003. *Neue Ent. Nachr.*, 55: 31.

**Distribution.** Yunnan (Drungjiang).

#### 11 *Halpe parakumara* Huang, 2003

*Halpe parakumara* Huang, 2003. *Neue Ent. Nachr.*, 55: 32

**Distribution.** Yunnan (Nujiang).

#### 12 *Halpe mixta* Huang, 2003

*Halpe mixta* Huang, 2003. *Neue Ent. Nachr.*, 55: 34.

**Distribution.** Yunnan (Nujiang).

#### 13 *Halpe muoi* Huang, 1999

*Halpe muoi* Huang, 1999. *Lambillionea*, 99 (4): 664.

**Distribution.** Yunnan (Qujing).

#### 14 *Halpe gamma* Evans, 1937

*Halpe gamma* Evans, 1937. *Entomologist*, 70: 17.

**Specimens examined.** 1, Lushan County, Sichuan Province, 1996, WANG Bing-Hong.

**Distribution.** Fujian, Sichuan, Taiwan.

#### 15 *Halpe sikkima* Moore, 1882

*Halpe sikkima* Moore, 1882. *Proc. Zool. Soc. Lond.*, 407.

**Distribution.** Hainan; Sikkim, Malaysia, Indonesia, Myanmar, Kalimantan.

#### 16 *Halpe hauxwelli* Evans, 1937

*Halpe hauxwelli* Evans, 1937. *Entomologist*, 10: 17.

**Distribution.** Yunnan (Xiaomengyang); India, Myanmar, Thailand.

#### 16 *Halpe paupera* Devyatkin, 2002

*Halpe paupera* Devyatkin, 2002. *Atalanta*, 23 (1/2): 129.

**Distribution.** Hong Kong; Vietnam.  
1 subspecies in China.

#### *Halpe paupera walthewi* Devyatkin, 2002

*Halpe paupera walthewi* Devyatkin, 2002. *Atalanta*, 23 (1/2): 130.

Distribution. Hong Kong.

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## 中国酣弄蝶属名录与一新种记述（鳞翅目，弄蝶科）

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**摘 要** 酣弄蝶属 *Halpe* 全世界已知 48 种，中国已知 16 种，在总结中国酣弄蝶分类研究的基础上，记述 1 新种：凹斑酣弄蝶 *Halpe concavimarginata* sp. nov.，制作了中国酣弄蝶属分种检索表。模式标本保存于西北农林科技大学昆虫博物馆。

**凹斑酣弄蝶，新种** *Halpe concavimarginata* sp. nov. (图 1~5)

新种外形与峨眉酣弄蝶 *Halpe nephele* Leech, 1893 非常近似，主要区别是：新种前翅长 18~20 mm；前翅中域斑的外缘向内凹入；前后翅的缘毛黑白相间非常明显；抱器端 2 分瓣间的“U”形凹陷跨度较小，凹陷底部无锯齿。峨眉酣弄

蝶 *Halpe nephele* Leech 前翅长 17.5~18.0 mm；前翅中域斑的外缘直，不凹入；前后翅的缘毛黑白相间不明显；抱器端两分瓣间“U”形凹陷跨度大，锯齿连续。

新种也近似白缘毛酣弄蝶 *Halpe albicilia* Tsukiyama et Chiba, 1991，区别在于白缘毛酣弄蝶前翅长 21 mm，后翅的缘毛全白色，外生殖器也不同。

模式标本 正模，副模 1，四川芦山，1996，汪炳红采。

**关键词** 鳞翅目，弄蝶科，酣弄蝶属，名录，新种，中国。

**中图分类号** Q969.437.9